

Applied Biosystems® 3130/3130xl Genetic Analyzers

3130 Series Data Collection Software 4

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This quick reference card supplements the *Applied Biosystems 3130/3130xl Genetic Analyzers Getting Started Guide* (Part no. 4477796) and the *Applied Biosystems 3130/3130xl Maintenance, Troubleshooting, and Reference Guide* (Part no. 4477854). Refer to the guides about performing the specified tasks and for important safety information.

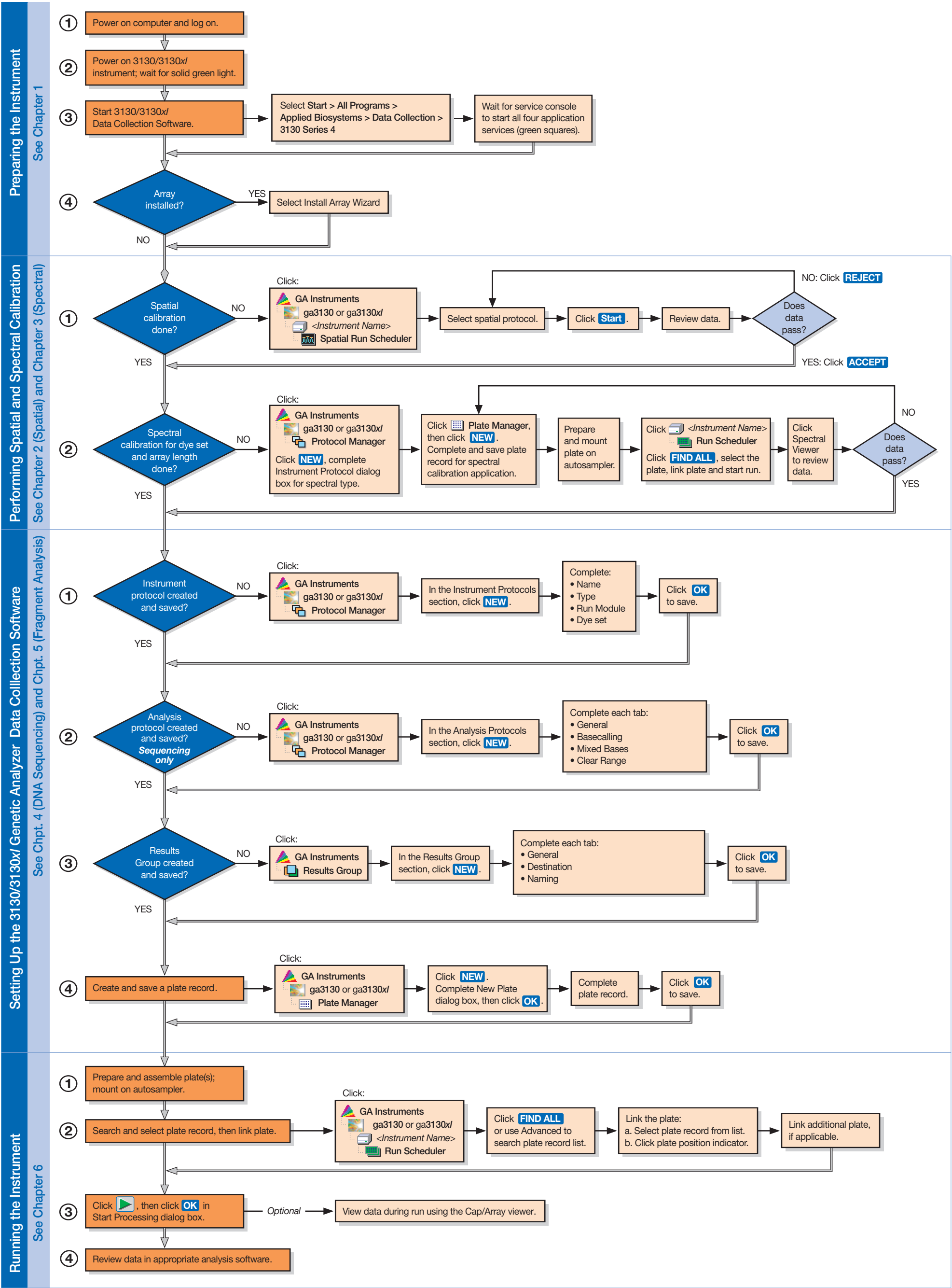
Instrument Maintenance Schedule

IMPORTANT! Refer to the Safety Data Sheets (SDSs) for chemicals listed in bold for safety information. Wear gloves any time you handle the polymer bottle, capillary array, septa, or buffer reservoirs.

Tasks	Frequency
Ensure that: Reservoir septa are firmly seated and flat. Holes in the plate retainer align with the holes in the septa. Plate assembly sits snugly on the plate deck.	Before each batch of runs
Replenish the water and 1X running buffer reservoirs on the 3130/3130xl instrument.	Daily or before each batch of runs
Remove bubbles in the polymer system.	
Check the loading-end header to ensure the capillary tips are not crushed or damaged.	
Check the level of polymer in the polymer supply bottle to ensure enough is available for all scheduled runs.	
Check the polymer block to ensure it fits securely on the 3130/3130xl instrument.	Daily
Clean the 3130/3130xl instrument surfaces.	
Check for dried polymer around the polymer block and clean as necessary.	
Check for leaks around all fittings on the pump and lower polymer blocks.	
Clean the water and buffer reservoirs.	Weekly
Clean the pump and lower polymer blocks.	
Check the storage conditions of the used arrays.	
Check database space and hard disk space.	
Restart the computer and instrument.	Weekly or as needed
Select Replenish Polymer or Change Polymer Type Wizard to replace polymer older than one week, in the upper polymer block and capillary array.	
Defragment the computer hard drive.	Monthly

Plate Mapping

Default Plate Mapping is displayed in the *Applied Biosystems 3130/3130xl Genetic Analyzers Getting Started Guide* (Part no. 4477796), "Appendix A, Plate Mapping."



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Sequencing Resolution Performance and Specifications



Type of Run	Capillary Length (cm)	Polymer Type	Module†	Run Time (min)	24 Hr Throughput (number of samples)		KB Basecaller QV ₂₀ LOR‡§
					3130 Genetic Analyzer	3130xI Genetic Analyzer	
Ultra rapid	36	POP-4®	UltraSeq36_POP4	40	144	576	400
		POP-7™	UltraSeq36_POP7	35	164	656	500
Rapid	36	POP-6™	RapidSeq36_POP6	60	96	384	500
		POP-7™	RapidSeq36_POP7		96	384	600
Fast	50	POP-7™	FastSeq50_POP7	60	96	384	700
Standard	50	POP-4®	StdSeq50_POP4	100	56	224	600
		POP-6™	StdSeq50_POP6	150	36	144	600
		POP-7™	StdSeq50_POP7	120	48	192	850
Long read	80	POP-4®	LongSeq80_POP4	210	24	96	700
		POP-7™	LongSeq80_POP7	170	32	128	950

† When using the BigDye® XTerminator Purification Kit, choose the BDx version of the Run Modules; for example, BDx_UltraSeq36_POP7.

‡ Length of Read (LOR) is the usable range of high-quality or high-accuracy bases determined by Quality Values (QV) generated by KB™ Basecaller v1.2. The LOR is determined by using a sliding window of 20 bases, which has an average QV > 20.

§ 98.5% basecalling accuracy, less than 2% Ns.

Fragment Analysis Run Module Specifications

Run Modules	Capillary Length (cm)	Polymer Type	Run Time (min)	24 Hr Throughput (GT†)	
				3130 Analyzer	3130xl Analyzer
High Throughput, Small Size Fragment Analysis					
FragmentAnalysis22_POP4	22	POP-4®	20	5,760	23,040
SNP22_POP4	22		20	5,760	23,040
Standard Fragment Analysis					
FragmentAnalysis36_POP4	36	POP-4®	45	2,560	10,240
HIDFragmentAnalysis36_POP4			45	2,560	10,240
SNP36_POP4			30	3,840	15,360
FragmentAnalysis36_POP7	50	POP-7™	35	3,290	13,170
FragmentAnalysis50_POP4		POP-4®	65	1,760	7,040
FragmentAnalysis50_POP6		POP-6™	90	1,200	4,800
FragmentAnalysis50_POP7		POP-7™	50	2,300	9,220
Large Size Fragment Analysis					
GS1200_36_POP7	36	POP-7™	125	880	3,520
GS1200_50_POP7	50	POP-7™	135	800	3,200
Fragment Analysis using Non-Denaturing Polymer					
ConformationAnalysis36_CAP	36	CAP	‡		

† 20 GT (Genotypes)/capillary/injection.

‡ Run time and 24 hr Throughput depend on customized polymer formulation and run module.

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